determining a second node by using the tag to access a routing bias table;

calculating an updated tag from the accessed tag by applying a normalizing function to the tag, the normalizing function used substantially throughout the network;

determining an element of a successor set by using the normalized tag to access the routing bias table;

replacing the tag of the packet with the updated tag to give an updated packet; and

routing the updated packet from the first node to the second node;

wherein the directed-graph index determines at least one destination node, and the routing bias table is selected from a plurality of routing bias tables indexed by the first node and the directed-graph index, and the routing bias tables satisfy an acyclic property, and the normalizing function enhances network performance by reducing the number of bits involved in accessing the routing table bias table.

2. (Original) The method of claim 1, wherein the second node is a destination node.

3. (Original) The method of claim 1 further comprising:

accessing a tag of the updated packet at the second node;

determining a third node by using the tag of the updated packet to access a second routing bias table;

calculating a second updated tag from the tag of the updated packet;

replacing the tag of the updated packet with the second updated tag to give a second updated packet; and

routing the second updated packet from the second node to the third node.

4. (Original) The method of claim 3 wherein the third node is a destination node.

Claims 5-8 (Cancelled)

9. (Original) The method of claim 1, wherein calculating an updated tag includes evaluating an updating function that is used substantially throughout the network.

10. (Original) The method of claim 9, wherein the updating function enhances network performance by randomizing packet routings.

11. (Original) The method of claim 10, wherein the routing bias table enhances network performance by allowing local preferences for routings.

12. (Currently Amended) The method of claim 8~~1~~, wherein calculating an updated tag includes evaluating an updating function that is used substantially throughout the network.

13. (Original) The method of claim 12, wherein the updating function enhances network performance by randomizing packet routings.

14. (Original) The method of claim 13, wherein the routing bias table enhances network performance by allowing local preferences for routings.

15. (Original) The method of claim 14, wherein,

for two packets having a common entry node, a common directed graph

index, and a common entry tag at the common entry node, an arrival sequence of the two packets at the common entry node is equivalent to an arrival sequence of the two packets at a common destination node.;

the common entry node defines an identical entry for the two packets into the network;

the common destination node defines an identical destination for the two packets in the network; and

the common entry tag at the common entry node defines an identical tag provided to each of the two packets before arrival at the common entry node.

16. (Original) The method of claim 1, wherein,

for two packets having a common entry node, a common directed-graph-index, and a common entry tag at the common entry node, an arrival sequence of the two packets at the common entry node is equivalent to an arrival sequence of the two packets at an intermediate node;

the common entry node defines an identical entry for the two packets into the network;

the common directed-graph index defines an identical routing for the two packets in the network; and

the common entry tag ant the common entry node defines an identical tag provided to each of the two packets before arrival at the common entry node.

17. (Original) The method of claim 16, wherein,

the common entry tag is calculated by operation of a hash function on a selection of bits belonging to either of the two packets.

18. (Currently Amended) A method for routing flows in a multipath network of

nodes, each flow including a sequence of packets, each flow having a flow entry node and a flow directed-graph index, and each packet including a tag having a plurality of bits included in the packet, comprising:

marking packets belonging to a flow with a flow entry tag before entry into the network at a flow entry node;

routing packets in the network by using the tags of packets to access entries in a plurality of routing bias tables determining a second node using the tag to access a first routing bias table selected from the plurality of routing bias tables, and routing the updated packet from the first node to the second node;

changing tags of packets in the network by accessing the tag of the packet at a first node, determining an updated tag from the tag and replacing the tag of the packet with the updated tag to give an updated packet, so that the packets of a flow receive an identical tag when being routed to an identical node.;

wherein determining a second node includes accessing a directed-graph index of the packet, calculating a normalized tag from the tag by applying a normalizing function to the tag, and determining an element of a successor set by using the normalized tag to access the first routing bias table, and the normalizing function enhances network performance by limiting bit operations in accessing the routing table bias table.

Claims 19-20 (Cancelled)

21. (Original) The method of claim 2018, wherein

the routing bias tables are indexed by a first node and a directed-graph index; and

the routing bias tables are indexed by a first node and a directed-graph index; and the routing bias tables satisfy an acyclic property.

22. (Cancelled)

23. (Currently Amended) The method of claim ~~22~~18, wherein calculating an normalized tag includes:

    evaluating a normalizing function that is used substantially throughout the network.

24. (Cancelled)

25. (Currently Amended) The method of claim ~~24~~18, wherein calculating an updated tag includes evaluating an updating function that is used substantially throughout the network.

26. (Original) The method of claim 25, wherein the updating function enhances network performance by randomizing packet routings.

27. (Original) The method of claim 26, wherein the routing bias table enhances network performance by allowing local preferences for routings.

28. (Currently Amended) The method of claim ~~24~~18, wherein calculating an updated tag includes evaluating an updating function that is used substantially throughout the network.

29. (Original) The method of claim 28, wherein the updating function enhances ~~network performance by randomizing packet routings.~~

30. (Original) The method of claim 29, wherein the routing bias table enhances network performance by allowing local preferences for routings.

31. (Original) The method of claim 30, wherein the arrival sequence of two packets of a given flow at the common entry node is equivalent to an arrival sequence of the two packets at an intermediate node of the given flow.

32. (Original) The method of claim 18, wherein an arrival sequence of two packets at a given flow at the common entry node of the given flow is equivalent to an arrival sequence of the two packets at an intermediate node of the given flow.

33. (Original) The method of claim 18, wherein the directed-graph index determines at least one destination node.

34. (Original) The method of claim 18, wherein:

the flow entry tag of a flow is calculated by operation of a hash function on a selection of bits belonging to a packet of the flow.